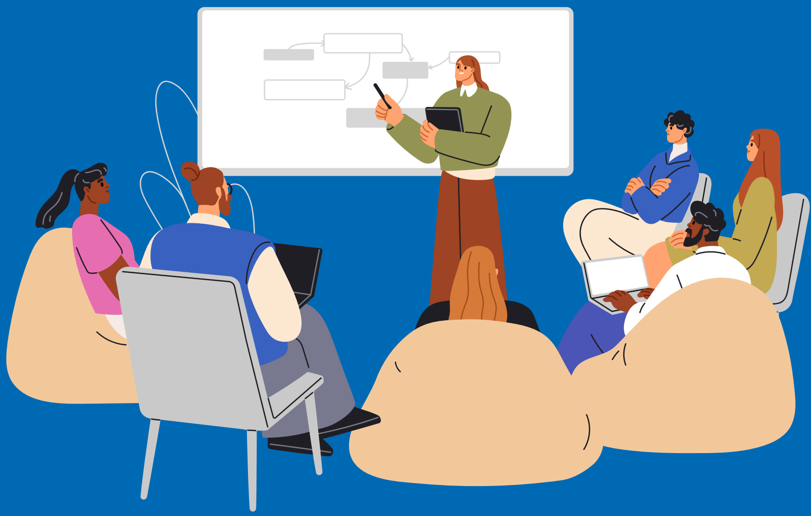

REHVA is hosting technical workshops at CLIMA 2025 to advance and **share the most reliable knowledge in the HVAC field.**

Technical Workshops

REHVA Workshops at CLIMA 2025

CLIMA World Congress 2025

Milan, Italy June 4th - June 6th

REHVA Federation of European Heating, Ventilation and Air Conditioning Associations

CLIMA 2025

Decarbonized, healthy, and energy-conscious buildings in future climates

4th - 6th June, Milan, Italy

June 4th

REHVA – ISHRAE

14:00 - 15:30 | Room BL27.0.5

Indoor climate targets and design requirements in Indian and European education buildings

Various investigations have shown that the indoor air quality in many schools worldwide is poor since ventilation rates are often low, exposure to outdoor pollutants indoors can be especially high in rapidly developing countries such as India, and thermal comfort can be unpleasant due to factors such as overheating. Pupils have reported being bothered by the indoor environment. In recent decades, there has been a growing awareness about energy consumption. As a result, the energy efficiency of buildings has been emphasised, often at the expense of the indoor environment. For this reason, the consequences of a poor IEQ in relation to health and performance in educational buildings are summarised.

The main objective of this workshop is to discuss various methods to improve simultaneously indoor climate and energy efficiency of education buildings. In addition, this workshop is to present the new REHVA-ISHRAE Guidebook on Indoor Environment and Energy Efficiency in Education Buildings

Speakers

- Mr. Mahesh L. Prabhu, Essem Group
- Dr. Jyotirmay Mathur, Malaviya National Institute of Technology Jaipur
- Dr. Nitin M. Deodhar, Vision Electro Mechanical Consultants Pvt. Ltd
- Prof. Livio Mazzarella, Politecnico di Milano
- Prof. Risto Kosonen, Aalto University

REHVA – SHASE

16:00 - 17:30 | Room BL27.0.5

Introduction of Joint position document by REHVA (EU) and SHASE (Japan) and ZEB case studies

This workshop will introduce the joint research activities carried out by SHASE and REHVA over the three-year period from 2022 to 2025. It will provide an overview of the Zero Emission and Zero Energy Building (ZEB) definitions in Japan and the EU. The methods for assessing the energy performance of buildings will be explained and the similarities and differences between the definitions of the EU and Japan will be discussed. Calculation examples of ZEB assessments and indicators based on the definitions of both parties will be provided. Next, focusing on the Load Matching Index as an evaluation index for building energy assessment, the impact of differences in the time interval for calculating energy balance on the index and the results of a study on the use of batteries will be reported. Finally, the results focusing to an optimal HVAC system analyses for ZEB will be discussed. The indoor thermal comfort, air quality and energy efficiency of three different air conditioning systems, consisting of VAV, chilled beam or radiant systems, will be compared, and a method of designing air conditioning systems that aims to achieve both an improved indoor environment and energy efficiency will be introduced.

Speakers

- Prof. Jarek Kurnitski, Tallinn University of Technology, Aalto University
- Prof. Gyuyoung Yoon, Nagoya City University
- Prof. Masaya Okumiya, Nagoya University
- Prof. Makiko Ukai, Nagoya University
- Dr. Kaiser Ahmed, Tallinn University of Technology

June 5th

REHVA Technology and Research Committee

10:15 - 11:45 | Room BL27.0.5

IEQ on EPBD: Long term assessment by simulation or monitoring, labels and regulation

The 2024 recast of the Energy Performance of Buildings Directive introduces significant new requirements for indoor environmental quality, setting a new standard for national regulations. This workshop will explore key changes, including the principle of optimal IEQ, the establishment of national IEQ requirements, and the mandatory integration of indoor air quality monitoring and regulation devices in new non-residential buildings.

Discussions will focus on the growing need for demand-controlled ventilation systems, which will become essential from 2028/2030, and the challenges of ensuring their long-term performance. With continuous monitoring generating vast amounts of data, we will examine tools and methodologies for assessing IAQ and thermal comfort, optimizing system operation, and improving occupant well-being.

Speakers

- Jarek Kurnitski, TalTech
- Pawel Wargocki, DTU
- Helena Kuivjõgi, TalTech
- Atze Boerstra, TU Delft

Energate & Moderate

11:30 - 13:00 | Room BL27.0.8

Facilitating energy efficiency in buildings: smart solutions for real estate, energy service companies and financiers

The building sector is a significant contributor to global energy consum-ption and greenhouse gas emissions, accounting for approximately 36% of energy use worldwide. Despite the vast potential for energy efficiency improvements in building renovations, progress remains limited. Challenges include high upfront costs, complex regulatory requirements, and often lengthy return-on-investment periods, which deter many property owners. Additionally, awareness and access to information about available financial incentives and technical solutions are frequently insufficient. Overcoming these barriers requires streamlined financing options, more accessible policy frameworks, and broader awareness of the long-term cost savings and environmental benefits of energy-efficient renovations.

Given the urgent need for energy efficiency improvements to meet climate goals, it is crucial to harness new and innovative technologies that make buildings more sustainable, smarter, and cost-effective.

This workshop will be an opportunity for the MODERATE and ENERGATE projects to share insights, technologies, and best practices, as well as to explore synergies. The event will serve as a platform for stakeholders to discuss the barriers, opportunities, and actionable strategies for advancing energy efficiency in buildings using smart technology and innovative financial models.

Energate is funded by the European Union under grant agreement no. ID101076349. Moderate is funded by the European Union under grant agreement no. 101069834

Speakers

- Frank Hovorka, AICVF President
- Cristian Pozza, EURAC Research (MODERATE)
- Daniele Antonucci, EURAC Research (MODERATE)
- Katerina Papapostolou, National Technical University of Athens (ENERGATE)
- Enersave Capital (ENERGATE)

REHVA – CAHVAC

14:00 - 15:30 | Room BL27.0.5

Healthy Sustainable Buildings in Europe and China

This workshop explores the integration of innovative HVAC technologies and sustainable building solutions, drawing from collaborative research by REHVA and CAHVAC. Presentations will address emerging challenges in energy efficiency, indoor environmental quality, and the health impacts of building designs.
Discussions will focus on multidisciplinary approaches and cutting-edge methodologies for optimizing HVAC systems. Experts will present insights into advanced energy performance assessments, case studies, and strategies to enhance both sustainability and occupant well-being. The session aims to foster knowledge exchange and collaboration among researchers, practitioners, and policymakers.

Speakers

- Prof. Livio Mazzarella, Politecnico di Milano, REHVA President
- Prof. Risto Kosonen, Aalto University, REHVA Vice-President
- Xu Wei, CAHVAC President
- Guangyu Cao, member of TRC
- Junjie Liu, Core member of CAHVAC
- Huai Li, Secretary General of CAHVAC Sub-committee of Building Intelligience

Next Gen EPC & tunES Project

16:30 - 18:00 | Room BL27.0.7

Practical Pathways to EPBD IV Implementation

The session will bring together representatives of the European Commission (DG ENER, CINEA), national authorities (e.g., ENEA Italy), and key EU funded projects, tunES, SmarterEPC and iEPB, to showcase how a new wave of EPC/SRI tools, data models, and auditing methods are enabling convergence with the EPBD IV provisions and guidance. Each project contributes with a unique technical focus: from innovative policy training, implementation and compliance tools (tunES) to harmonised onsite audits and joint EPC+SRI certificates (SmarterEPC), and to integrated data structures and calculation engines (iEPB).

The workshop will conclude with an interactive panel discussion, providing a space for critical insights and suggestions from EU officials, lessons learned from the EU project teams and the broader HVAC and building performance community. By weaving together policy, practice, and innovation, this session aims to help stakeholders navigate the EPBD IV rollout with actionable insights and collaborative pathways forward.

tunES, SmarterEPC and iEPB projects have received funding from the European Union's LIFE Clean Energy Transition subprogramme.

Speakers - Chair: Andrei Vladimir LITIU, EPB Center

- Pau GARCIA AUDI, DG ENER
- Ulrike NUSCHELER, CINEA
- Francesca CAFFARI, ENEA
- Alessandra GUGLIANDOLO, ENEA
- Tomasz CHOLEWA, tunES
- Giorgio FICCO, tunES
- Rune Korsholm ANDERSEN, tunES
- Paris A. FOKAIDES, SmarterEPC
- Eva LUCAS SEGARRA, iEPB

REHVA Supporter: Spacecool

16:30 - 18:00 | Room BL27.0.8

Cooling without Energy Consumption - Introduction to Passive Radiative Cooling & Novel Cooling Systems based on it

The year 2024 was the hottest recorded ever in Europe while according to the IEA the electrical energy consumption for surged to nearly double the annual average over the past decade. One of the main drivers for this increase was energy needed for cooling. Just a decade ago, in 2014 Prof. Raman of the University of Stanford published a paper on a natural phenomenon called Passive Radiative Cooling (PRC). An effect which allows surfaces to cool down below ambient temperature even in bright sunlight. Although it is a phenomenon observed and even used by mankind over centuries, his paper for the first time explained the physics behind it in detail. It also led to the creation of products, making this effect usable for cooling of objects. Although the initial paper has been published a decade ago, it still is far away from being commonly known. Accordingly, PRC materials are not at all commonly used or even known in the relevant industries.

In this workshop we will introduce into the phenomenon of PRC. Its physics will be explained and also a view on the actual state of research. This will include a peek onto the currently conducted Parametric project, which aims at defining standard measurement methods and is conducted by the meteorological scientific community of the EU. We will also illustrate how the phenomenon was transformed into a product that can be widely adopted to relevant industries. We will illustrate how and where it is already successfully applied. We would like to take three steps with the audience.

In the first step we will show the application and the effect of passive radiative cooling to surfaces. This includes buildings and installations, where the PRC effect can lead to avoiding the use of active cooling means. In the next step, we would like to illustrate and discuss combination of PRC with active cooling means. There are various ways of applying it to or combine it with HVAC systems in order to reduce energy consumption, increase performance and reduce failure. Most of the cases discussed will be based on a retrofit application.

In the workshop we would like to encourage and discuss the potential of applying PRC materials initially at the design stage to HVAC systems. This will lead to the last step: the combination of the radiative cooling material from SPACECOOL with a radiant cooling system for indoor cooling. This innovative approach which has been realized and tested in summer 2024 in Spain will serve as an example how sustainable cooling innovation is possible based on PRC and can lead to sustainable product innovation.

An active involvement of the audience will be very much appreciated and encouraged over the whole course of the workshop. In the closing discussion space for feedback will be given while aiming ideally at the creation of workgroups spinning off from the workshop. Ideas for further research and product creation will be shared.

Speakers

- Dr. Masahiro SUEMITSU, SPACECOOL Inc.
- Dr. Edurardo Gonzalez, CSIC-EITCC
- Alexander M. SCHMOLDT, SPACECOOL Inc.

June 6th

SmartSquare

10:15 - 11:45 | Room BL27.0.7

Advancing SRI Implementation: Connecting EPBD provisions and regional adoption with project outcomes

The recast of the Energy Performance of Buildings Directive (EPBD) – Directive (EU) 2024/1275 – strengthens provisions to enhance building smartness, aligning with the European Green Deal.
The Smart Readiness Indicator (SRI), first introduced in the 2018 amendment of the EPBD, remains the EU's common scheme for rating building smartness and is further detailed in Article 15 of the revised EPBD. While still an optional scheme, an implementing act is expected by 30 June 2027, mandating the application of the SRI to non-residential buildings with heating, air-conditioning, or ventilation systems exceeding 290 kW. This makes it imperative for service engineers, building owners, and Member States to familiarize themselves with the scheme ahead of its implementation.

Why attend this workshop?
This workshop aims to accelerate the adoption of the SRI in Italy by equipping building professionals with the latest insights and resources.

The session begins with an overview of the EPBD recast and the SRI framework, at the European and Italian level., will discuss the ongoing non-committal test phase. Next, the Smart Square project's scientific coordinator will introduce the EU-funded initiative and its suite of free resources to support national SRI uptake. Then, the main results of the project will be demonstrated:

- CEN Workshop Agreement (CWA 18193:2025) on how to conduct high-quality smartness assessments in buildings.
- Smart-Ready-Go!, the free and web-based SRI assessment tool. Available in all European languages, the tool will be demonstrated on signature Italian buildings and an overview of the SRI across the European building stock will be presented.
- The Smart Readiness Virtual Training Centre, the free and interactive e-learning platform for the upskilling of building service engineers and other stakeholders to become smart readiness assessors. In addition, a public launch of the Italian version of the e-learning platform.
- Open Questions and Answers from the audience.

Live SRI Demonstrations at CLIMA 2025
Beyond the workshop, Smart Square project representatives will be available throughout CLIMA 2025 for free, on-the-spot demonstrations of the SRI assessment. Don't miss this opportunity to see how the SRI is applied in practice and to ask questions directly to the experts!

Funded by the European Union, under the Grant Agreement N° 101077241.

Speakers

- Pablo Carnero, REHVA
- Paris Fokaides, Euphyia
- Tom Messervey, R2M Solutions
- Marco Pietrobon, R2M Solutions
- Afroditi Zamanidou, IsZEB
- Antonello Magliozzi, ARCADIS
- Nicolas Constantinou, CYRIC

EU Policy Advocacy Group

14:00 - 15:30 | Room BL27.0.5

Driving change: turning technical expertise into actionable policy input

This workshop will highlight how REHVA actively contributes to EU policy shaping by turning technical expertise into actionable policy input. The REHVA EU Policy Advocacy Group (EU PAG) plays a central role in this process, acting as a bridge between REHVA's technical work and the European Commission's policymaking.

REHVA's technical content, developed within its Task Forces in the framework of the Technology and Research Committee (TRC), is regularly transformed into policy messages and recommendations. These are delivered to the European Commission through the EU PAG, with the active support of REHVA's member associations and corporate Supporters, ensuring a well-rounded, practice-based contribution to the regulatory debate. This collaborative process has led to concrete input into key EU initiatives, notably the implementation of the Energy Performance of Buildings Directive (EPBD).

To complement this point, REHVA supporters and members will intervene as speakers and panellists, to highlight the specific perspective of an industrial association and/or a company, their necessities related to EU policies and why, from their perspective, it is an added value to pursue policy-advocacy goals within the REHVA umbrella

The workshop will also present the REHVA Manifesto, our strategic roadmap aligning with EU climate goals and calling for healthier, decarbonised and energy-efficient buildings. In doing so, REHVA brings together building designers, engineers and installers with companies and industrial associations to pursue shared goals.

With no one-size-fits-all solution, REHVA continues to champion a holistic, cross-sectoral approach to drive meaningful change in Europe's built environment.

Speakers

- Johann Zirngibl, REHVA Vice President, EPB Expert, EU PAG Leader
- Francesco Robimarga, REHVA Policy & Advocacy Officer
- Martin Dieryckx, General Manager, Environment Research Centre of Daikin EMEA
- Jaap Hogeling, EPB Center, Member of TRC
- Francesco Scuderi, Secretary General, EUROVENT
- Frank Hovorka, AICVF President